RELEVANT DIMENSIONS AND CONTEXTUAL WEIGHTS OF DISTANCE IN INTERNATIONAL BUSINESS DECISIONS: EVIDENCE FROM SPANISH AND CHINESE OUTWARD FDI

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Abstract: We investigate how distance and different dimensions of distance between countries explain the outward FDI of firms according to distinct home country contexts. We identify three important dimensions of country distance: socio-economic development distance, cultural and historical distance and physical distance. We then empirically explore whether these dimensions receive different weights when explaining the location of FDI depending on its origin by comparing the outward FDI of China and Spain using partial least squares-based structural equations modelling (SEM-PLS). We find that although country distance significantly explains the FDI of both countries, the weights of the three dimensions of distance depend on the home country context. More specifically, we find that all three dimensions of distance explain the direction of Spanish investments, whereas only cultural and historical distance significantly explains Chinese outward FDI. Our research advances the understanding of distance between countries, the dimensions of distance, and how context influences the impact of the dimensions of distance.

Highlights:

- We identify three different dimensions of country distance
- We explore how these relate to outward FDI, comparing flows from China and Spain
- We find that country distance explains FDI of both countries
- But the weights of the three dimensions depend on the home country context
- We advance understanding of the influence of context on dimensions of distance.

Keywords: Country Distance; Dimensions of Distance; Contextual weights; FDI.

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1. Introduction

Despite the process of globalisation, countries continue to differ in a number of characteristics that are relevant for international business (IB) academics and practitioners. These characteristics comprise a country's economic, social, political, cultural, and historical settings and pose different challenges to foreign firms (Estrin, Baghdasaryan and Meyer, 2009; Salomon and Wu, 2012). Indeed, these differences contribute to creating relatively attractive business environments, and the generally accepted view is that the greater the differences between countries, the more difficult it is to use strategies in the host market that are similar to those implemented 'at home' (Gaston-Bretton and Martín Martín, 2011; Steenkamp and Ter Hofstede, 2002). An important question, thus, is how we can measure these differences so they support international decision making. Although recent contributions to the study of cultural differences have suggested shifting from "distance" to "friction" (Shenkar, Luo and Yeheskel, 2008; Shenkar, 2012), there is wide agreement in the IB literature that differences between countries can be measured in terms of distance (e.g., Shenkar, 2001; Zaheer, Spring Schomaker and Nachum, 2012). Distance, therefore, as an established operationalization of these differences, allows us to measure, compare and understand variations across countries.

Different measures of distance have been proposed in the IB literature. While cultural frameworks (e.g., Hofstede, 1980; House et al., 2004; Inglehart, 1997; Schwartz, 1992, 1994) and measures (Kogut and Singh, 1988; Reus and Lamont, 2009) capture only one dimension of country distance, and, therefore, should not be used as general measures of distance between countries, several multidimensional conceptualisations have emerged in recent years (e.g., Berry et al., 2010; Dow and Karanuratna, 2006; Ghemawat, 2001; Martín Martín and Drogendijk, 2014). These conceptualisations, which have been anchored in different theoretical perspectives such as institutional theory (e.g., Berry et al., 2010; Kostova, 1999; Salomon and Wu, 2012),

internationalisation and the related concept of psychic distance (e.g., Brewer, 2007a; Dow and Karunaratna, 2006; Dow and Larimo, 2009; Håkanson and Ambos, 2010; Sousa and Lages, 2011), are relevant for our purposes.

Multidimensional conceptualisations have not only resulted in measures including more factors of distance (e.g., Child et al., 2009; Hutzschenreuter, Kleindienst and Lange, 2014; Malhotra et al., 2009), they have also outlined the importance of using reliable and valid measures (e.g., Sousa and Lages, 2011), thus identifying promising avenues for future research. In this light, a particularly important question that has not been adequately addressed in IB literature is "What are the relevant dimensions of distance?" Although it has recently been shown that different distance dimensions matter in different ways to different firm expansion choices (Berry et al., 2010), the extent to which the importance of the dimensions is contingent on the country and on the empirical context in which they are obtained is a generally neglected issue. Certainly, managers and scholars need not only reliable and valid measures of how different or similar countries are, including what dimensions create distance between countries, but they also need guidance on how important different dimensions are in a particular country context.

The objective of this research is to fill in this gap on the contextual importance of distance dimensions by studying relevant dimensions of country distance and exploring whether and how their importance changes in different empirical contexts. We contribute to the IB literature, and more specifically, to the conceptualisation, operationalization and discussion of distance, by investigating the multidimensionality of distance across countries and formalising the importance of its dimensions in two empirical settings, namely, the outward FDI (OFDI) of China and Spain. The explanation of FDI and its direction has been one of the central issues for IB researchers (Buckley, 2002), and distance measures have regularly been used to explain the location of firms' foreign investments (Berry et al., 2010; Dow and Ferencikova, 2010; Estrin et al., 2009). The findings of our study suggest that although the relevant dimensions of country distance may be similar across empirical contexts, the significance and relative importance of these dimensions will be dependent not only on factors such as the decision that must be made

(e.g., FDI vs. exporting, as shown by Berry et al., 2010) but also on the home country context. This finding has important implications for our use of the distance concept in IB studies as well as in practice.

This paper is structured as follows. We first present a review of the literature regarding concepts of distance in IB research, provide the theoretical foundation of our construct and develop two basic research hypotheses that are focused on a specific, and important, IB decision: the location of OFDI. Second, we describe the methodology and continue to present the results of our analyses. Finally, we discuss our findings and their practical implications, formulate two propositions for future validation, and identify limitations of this paper and future research avenues.

2. Theoretical background

Differences between countries and their effects on IB have long been the subject of extensive research that has resulted in a range of distance concepts and measures. These comprise cultural (Kogut and Singh, 1988), linguistic (Schomaker and Zaheer, 2014; West and Graham, 2004), human resource (Estrin et al., 2009), institutional (Kostova, 1999), and psychic distance (Vahlne and Wiedersheim-Paul, 1977; Johanson and Wiedersheim-Paul, 1975). While including most of the factors covered by the others, psychic distance adds managerial perception to the distance concept (O'Grady and Lane, 1996; Sousa and Bradley, 2006). Cultural distance, the most widely used measure of distance between countries (Drogendijk and Slangen, 2006; Shenkar, 2001; Tihanyi et al., 2005), focuses on only one dimension to explain inter-country variation while ignoring differences in others such as political systems, the level of economic development and other factors that define the 'total distance' between countries (e.g., Child et al., 2009; Ghemawat, 2001; Malhotra et al., 2009). Further, both the concept of cultural distance and the use of its dominant measure, the Kogut and Singh (1988) index, have been disputed in the literature (Drogendijk and Zander, 2010; Salk, 2012; Shenkar et al., 2008; Luo and Shenkar, 2011; Shenkar, 2012; Taras et al., 2009). Dow and Larimo (2011), arguing that research has shown a heavy reliance on the Kogut and Singh index, contend, "a much broader

conceptualisation of distance is required in international business research" (Dow and Larimo, 2011: 329). Similarly, Zaheer and colleagues (2012) suggest that researchers should avoid oversimplification and investigate characteristics and specificity of the cultural differences between two objects of study (often countries) and should think "outside the uni-dimensional box" (2012: 25).

Two main theoretical lenses have been applied to the study of multidimensional constructs of distance: institutional theory (Scott, 1995) and internationalisation (Johanson and Vahlne, 1977; Johanson and Wiedersheim-Paul, 1975). Institutional theory explains that various social, economic, and political factors form the institutional setting of a particular environment that affects firms' operations within that environment. Institutions are defined as regulative, normative, and cognitive structures that constrain the actions and behaviours of organisations by rule of law and normative sanctions or by setting cognitive limitations on choices for alternative behaviours (Jackson and Deeg, 2008; Kostova, 1999; Scott, 1995). While a number of studies have conceptualised or measured the institutional environment (e.g., Gaur, Delios, and Singh, 2007; Henisz, 2000a; Henisz, 2000b; Kostova, 1997, 1999; Stoian, 2013; Stoian and Filippaios, 2008), several contributions discuss wide sets of dimensions and indicators that can be included in institutional distance measures (e.g., Berry et al., 2010; Delios and Beamish, 1999; Gaur and Lu, 2007; Wan and Hoskisson, 2003). Although we find much inspiration in institutional theory for developing a multidimensional distance construct, our approach also relies on another theoretical perspective to build our measure.

Psychic distance has gained influence mainly through the internationalisation literature and the Uppsala model (e.g., Johanson and Vahlne, 1977; Johanson and Wiedersheim-Paul, 1975; Vahlne and Wiedersheim-Paul, 1977). The concept was introduced to capture the distortion of information between firms and markets, which is the result of differences between the home and host markets *and* managers' perceptions of these differences (cf., Johanson and Wiedersheim-Paul, 1975). It is said that psychic distance creates uncertainty and obstacles to decision making connected with the development of international operations (Johanson and Vahlne, 1977). Much of the work in this field has relied, to some extent, on the original

definition of “factors preventing or disturbing the flow of information between firms and markets” (Johanson and Wiedersheim-Paul, 1975: 308) for its multidimensional conceptualisations and measures (e.g., Brewer 2007a; Dow and Karunaratna 2006; Dow and Larimo, 2009).

Some researchers have argued that we should use perceptual measures of psychic distance (Stöttinger and Schlegelmilch, 1998, 2000; Prime et al., 2012) at the individual level (Evans and Mavondo, 2002, Evans et al., 2008; Håkanson and Ambos, 2010; Sousa and Bradley, 2006) to do full justice to its content. Others claim that the mixed use of measurements based on publicly available data-sources and subjective measures collected from samples of managers and experts has confused the measurement and application of the concept of psychic distance (Clark and Pugh, 2001; Evans et al, 2000). Dow and Karunaratna (2006) proposed a set of measures for psychic distance stimuli, i.e., factors that influence the perception of managers. This approach allows for the inclusion of many sources of distance between countries, such as culture and language, and economic development and political systems that are related to institutional differences as well as geographical distance. The latter, which often used in distance studies in IB, is prone to much discussion in the field of economic geography (e.g., Beugelsdijk, McCann, and Mudambi, 2010). At the same time, measuring stimuli but not perception allows researchers to build their research designs using secondary data. A problem that Dow and Karunaratna (2006) encountered in their models, however, is the high correlations among the stimuli they distinguished. Our conceptualisation of country distance includes the same wide variety of sources of distance between countries *and* builds on secondary data. However, we propose a multidimensional construct that is better able to address and actually benefit from the correlations among the indicators. Our conceptualisation further allows comparing the weights of the different dimensions in country distance and that, in turn, will help us better identify which differences play a role in which context.

3. Conceptualisation of Country Distance and Hypothesis Development

3.1. Conceptualisation of Country Distance

Based on these theoretical perspectives, we distinguish three basic dimensions of distance: socio-economic development distance, cultural and historical distance and physical distance. We assume that these three dimensions cause a latent construct, 'country distance', rather than reflect its changes. It is appropriate to conceptualise country distance (COD) as a formative index as the three dimensions define aspects of the construct. Thus, there is no reason to believe that the dimensions are necessarily correlated[3], and changes in any of them are expected to cause a variation in their values (Diamantopoulos and Siguaw, 2006; Diamantopoulos et al., 2008). Our approach is also consistent with the first recommendation by Ambos and Håkanson (2014: 5) regarding the use of distance measures, "Thus, future studies should incorporate more than one distance measure, or opt for a composite index […])".

("Insert Figure 1 about here")

Socio-economic development distance. We conceptualise socio-economic development distance as a reflective first-order construct. We assume socio-economic development distance to be reflected in a number of variables, such as educational distance, political distance and economic development distance. These variables have been included as factors explained by institutional distance in the literature (e.g., Berry et al., 2010) and were also mentioned as examples of factors influencing psychic distance in the early days of the development of the concept (Johanson and Wiedersheim-Paul, 1975; Vahlne and Wiedersheim-Paul, 1977). They have also been included in recent measurements of distance between countries (e.g., Berry et al., 2010; Dow and Karunaratna, 2006; Ghemawat, 2001).

Absolute levels of education and economic development influence the availability of information about markets and the ease with which information can flow to potential investors (Brewer, 2007a; Dow and Karanuratna, 2006; Johanson and Wiedersheim-Paul, 1975). In

[3] This is in contrast to a reflective measurement model where dimensions are necessarily correlated. We do not assume the dimensions to be necessarily correlated because, for instance, a country can be close to other countries in socio-economic development but distant in cultural, historical and physical aspects.

markets with high levels of education and economic development, it is more likely that information is collected in printed or electronic form and diffused among the public than in markets with lower levels of development. Education also influences the way in which people present information and construct arguments. Furthermore, differences between the education levels and political systems of two countries can lead to uncertainty and confusion in the transmission and interpretation of information (Dow and Karunaratna, 2006). Likewise, higher levels of economic development and similarities in political systems assure less uncertainty in business agreements and transactions (Brewer, 2007a; Ghemawat, 2001). When the host country is more economically developed than the home country, differences in economic development may allow companies to explore local resources. In contrast, lower levels of economic development of the host country may allow companies to exploit their resources in the host market (Tsang and Yip, 2007). Differences in political systems and political instability make it difficult for investing firms to assess risks related to government action (Henisz, 2000a). Finally, differences in the levels of economic development and education and in political systems reflect diverging characteristics in all three institutional domains, regulatory, normative and cognitive, and therefore, they may affect the organisation of business and the fit of practices in new environments (cf. Kostova, 1999).

While many researchers have only included indicators related to the level of economic development in their distance measurements, Ghemawat (2001) also included administrative (or political) distance and conceptualised this as distinct and separate from economic distance. Dow and Karunaratna (2006), however, measured indicators addressing all three factors and found a high correlation among these factors in their study, thus reinforcing our decision to conceptualise them as reflecting the same dimension. Socio-economic development distance encompasses indicators of the level of education and (il)literacy, political systems and level of

democracy, and economic development and welfare - all of which are linked to a society's social and political institutions[4].

Cultural and historical distance. We conceptualise cultural and historical distance as another reflective first-order construct covering three indicators: language distance, distance between religions, and colonial ties. It is undeniable that differences in language are among the factors that distort information flows and increase uncertainty regarding foreign markets (Brewer, 2007a; Johanson and Wiedersheim-Paul, 1975). Not speaking the same (native) language gives rise to inefficiency and compromises clarity of communication, transfer and interpretation of information. Accordingly, language has even been proposed as an objective proxy for cultural distance (West and Graham, 2004), and language similarity measures have been employed by researchers engaged in the measurement of psychic distance and the factors that trigger it (Brewer, 2007a; Dow and Karunaratna, 2006). That language differences presented challenges for doing business in foreign countries is well-known from the popular press as such differences can lead to mistakes, for example, when firms translate product names and slogans into English (Ricks, 1993). Researchers have also recognised the challenges associated with speaking different languages and with non-native speakers speaking English as a common international language in arm's length trade relations (e.g., Hutchingson, 2005) as well as within multinational corporations (e.g., Welch et al., 2001). From such examples, we can conclude that speaking the same language is an obvious advantage for business across borders.

Religion also relates closely to and affects cultural differences (Ronen and Shenkar, 2013). Not only have the current numbers of followers of the diverse religions shaped people's

[4] Our conceptualisation of socio-economic development distance results in a symmetric measurement (cf. Berry et al., 2010; Dow and Karunaratna, 2006). We agree with Berry et al. (2010) that the literature is not conclusive about the best way to measure the distance between two points or objects and that there are "desirable properties that distance measures ought to exhibit" among which are symmetry and non-negativity (Berry et al., 2010: 1468). Distance is symmetric if the differences between two countries are the same, regardless of which country is taken as the baseline country ($d_{ij} = d_{ji}$ for all countries i and j). Non-negativity connotes that the distance between two countries can never be smaller than zero ($d_{ij} >= 0$ for all i and j). Together these assumptions imply that the distance and, therefore, the differences between two countries would be the same regardless of whether this distance is positive or negative. In other words, two countries can be at the same distance to a baseline country when one country has a higher value on the distance measure and the other has a lower value than the base country on this measure. This is relevant when building a multidimensional and objective measure of distance.

norms, values and behaviours but so, too, have the influences of major religions on culture throughout history - and they continue to do so. Differences in religion can lead to misunderstandings, misinterpretations and disagreements, thus distorting interactions and information flows. The different views of the Christian and Muslim religions with regard to paying interest are an often mentioned example of the influence of differences in religious practices affecting companies' activities abroad. The various religions of the world also influence eating and drinking habits as well as values regarding the roles of men and women in society and business. Dow and Karunaratna (2006) were the first to include differences between religions beyond the dummy level into their measure of psychic distance stimuli. As language and religion are two of the most important objective and enduring manifestations of human culture, differences in language and religion have been used in prior conceptualisations of cultural and institutional distance (e.g., Berry et al., 2010; Ghemawat, 2001).

The existence (or absence) of historical and past colonial ties between countries strongly influences their current cultural links, potentially compressing psychic distance (Child et al., 2002; Johanson and Wiedersheim-Paul, 1975). Makino and Tsang (2011) refer to colonial links as informal historical ties that are related to often unwritten rules and procedures and to common norms and values. They contend that informal historical ties have a persisting effect on the economic linkages between two countries. In contrast, they conceptualise formal historical ties as intentionally created relations in the form of agreements and treaties between countries. Taken together, formal and informal institutional arrangements are likely to show similarities when countries share a colonial past (Berry et al., 2010; Makino and Tsang, 2011). Furthermore, the presence of colonial ties increases the knowledge that people in one country have of the other, allowing information to flow more easily between a firm and the foreign market (Brewer, 2007a). This is comparable to the positive effect of the presence of ethnic Chinese populations in host markets on investments as found in studies on Chinese OFDI (Buckley et al., 2007). Colonial ties have been included in recent measurements of psychic distance denominators (Brewer, 2007a; Dow and Karunaratna, 2006) and institutional distance (Berry et al., 2010). We conceptualise historical and colonial ties as part of the cultural and historical distance dimension

of COD because of the obvious impact of historical and colonial ties on language (Ethnologue, 2008) and the strong relation between the two (Rauch, 1999), which is also reflected in the high correlation of language and colonial ties (r = 0.65) reported in Dow and Karanuratna's (2006) work. Our inclusion of colonial ties in the same dimension as language and religion distance is also in accordance with the conceptualisation of Makino and Tsang (2011).

Prior studies have shown that measures of cultural differences based on cultural dimensions such as those defined by Hofstede (1980) are less appropriate as denominators of measures of psychic distance (Dow and Karunaratna, 2006). Moreover, the inclusion of data from cultural value studies seriously limits the number of countries and, therefore, the international diversity, which can be covered by a study of distance across countries. Accordingly, we propose that cultural and historical distance is reflected in the three variables previously discussed: language differences, differences between religions and the existence of historical ties.

Physical distance. Physical distance, a third reflective first-order construct, captures two key magnitudes of physics - time and space. In other words, it not only includes geographical distance but also differences in time zones between countries. Geographical distance has frequently been used alongside measures of cultural, psychic and institutional distance and has been shown to relate positively to these measures (Berry et al., 2010; Brewer, 2007a; Child et al., 2002; Clark and Pugh, 2001; Dow, 2000; Dow and Karunaratna, 2006; Johanson and Wiedersheim-Paul, 1975; Stöttinger and Schlegelmilch, 1998). Despite geographical distance 'decreasing' as a result of globalisation and related processes, it is still a factor that undeniably affects firms' international decisions, such as investment decisions (Ghemawat, 2001; Håkanson and Ambos, 2010). Larger geographical distance between countries implies increased transportation and communication costs and thus leads to reduced trade and investment flows (e.g., Berry et al., 2010). While temporal or time zone differences have been included less often as factors influencing distance (see for examples: Child et al., 2002; Dow and Karunaratna, 2006), differences in time zones can be said to increase uncertainty in the speed of

communication (Dow and Karunaratna, 2006), which may lead to delays, confusion and loss of accuracy when information travels and crosses (several) time zones.

3.2. Hypotheses development

In both institutional and psychic distance literatures, larger country distance is expected to entail more difficulties for firms as they seek to understand the foreign markets, establish legitimacy, and manage operations and assets in these markets (Johanson and Vahlne, 1977; Xu and Shenkar, 2002). Therefore, it is argued that distance affects firms' international investment decisions, including where – in which countries – to direct investments. First, firms invest not only in countries with more favourable regulations, incentives, and developed institutions (cf. Dow and Karunaratna, 2006) but also in those whose institutional environments are more similar to their home country's (Berry et al., 2010; Jackson and Deeg, 2008). Second, FDI is sensitive to factors that create challenges to understanding markets and identifying opportunities. As differences in cultural and historical factors and physical distance result in increased perceived market uncertainty, firms are expected to internationalise and invest in markets with low uncertainty (Johanson and Vahlne, 1977). Country differences in these dimensions also limit the transferability of existing business models or strategies to foreign markets (Kostova, 1999) as well as firms' cognitive abilities to select alternatives to known patterns of behaviour (Jackson and Deeg, 2008).

Although a few studies have discussed a moderating effect of measures of distance on, for example, the market size–entry sequence relationship (Ellis, 2008), we are in agreement with the more general view that distance has a direct effect on FDI (Dow and Ferencikova, 2010) as shown in the context of wholly owned subsidiaries (Dow and Larimo, 2009) and cross-border acquisitions (Dow and Larimo, 2011; Malhotra et al., 2009). The more differences there are between the home country and host country in terms of the three distinguished dimensions (i.e., the more distance between them), the less likely that firms will select these countries for their investments. We therefore hypothesise:

Hypothesis 1: “The larger the country distance between the home and host country, the lower the level of outward FDI to that host country”.

Hypothesis 1 summarises the expected effect of the multidimensional concept of country distance on a key IB decision: the direction of outgoing direct investments. We test this hypothesis in two distinct empirical settings, namely, two different home countries - China and Spain. Doing so allows us to also investigate the relative importance of the three dimensions of country distance (socio-economic development distance, cultural and historical distance and physical distance) depending on the context, the OFDI from the two different national contexts. Recent contributions to institutional theory suggest that the home country institutional environment plays an important role in the institutional complexity that confronts multinational corporations (Jackson and Deeg, 2008), a premise corroborated by empirical evidence regarding the role of national institutional contexts on outward investments by firms (Stoian, 2013) and work on investment development paths that emphasises the importance of government policies towards FDI (e.g., Narula and Guimón, 2010). We suggest that home country environments are relevant contexts in which to compare the relative importance of dimensions of distance. However, no previous studies exist that identify particular dimensions of distance to be important in particular (national) contexts. Therefore, we formulate Hypothesis 2 in general terms and expect to find differences in the importance of the dimensions of distance in explaining the OFDI from different countries:

Hypothesis 2: “The relative importance of the different dimensions of distance depends on the home country context”.

4. Methods

4.1. Sample and data

We used OFDI from China and Spain as the empirical contexts to test and validate our model. China and Spain were selected because they are two distant countries in terms of country

distance (COD) and its dimensions (Martín Martín and Drogendijk, 2014). Maximising the distance between the baseline countries ensures that observed effects on the dependent variable are more likely to be attributable to the focal independent variable (Sivakumar and Nakata, 2001). Second, China and Spain have different geographical patterns of FDI, are in different stages of development (China being considered as an emerging powerhouse and Spain a developed country), and can offer relevant implications to researchers and decision makers. Spain has mainly been a recipient of FDI until the 1970s, when OFDI driven by Spanish firms' internationalisation increased and later accelerated after the country joined the European Community in 1986 (Alguacil & Orts, 2002). China's OFDI started cautiously in the early 1980s, but increased moderately for two decades facilitated by less restrictive policies of the Chinese government. In 1999, the Go Global Strategy was initiated to promote Chinese investments abroad, and in 2001, China became a member of the WTO, which resulted in rapid increases of OFDI (Buckley et al., 2008). Enormous foreign reserves, pressure on the foreign exchange rate of the renminbi and the intention to increase the competitiveness of Chinese firms are among the motives of the government's current strategy to encourage enterprises to invest abroad and acquire foreign assets.

The data for China are from the Statistical Bulletin of China's Outward Foreign Direct Investment, published by the Ministry of Commerce of the People's Republic of China (MOFCOM), the National Bureau of Statistics of the People's Republic of China and the State Administration of Foreign Exchange (SAFE). The Spanish data were collected from DataInvex, a database of the Ministry of Economy and Competitiveness.

We selected the 120 countries and territories for which data on five of the constructs reflected in two of the COD dimensions were available. From this list, we first excluded Hong Kong and Taiwan because it can be questioned whether investments are the result of international flows in the Chinese empirical context and, as the label of our central construct indicates, our level of analysis is the country. This decision is also supported by the fact that

Hong Kong is an outlier, representing close to 67% of all Chinese OFDI (stock)[5]. Second, we dropped ten countries and territories for which there were missing values in both the databases regarding Chinese and Spanish OFDI (Cook Islands, El Salvador, French Polynesia, Guam, Guatemala, Nauru, New Caledonia, Puerto Rico, Slovenia and Solomon Islands). Finally, to have exactly the same set of destination countries and total comparability between our two baseline countries, we excluded China and Spain as OFDI destinations from the analyses. Thus, we studied the OFDI of 106 destination countries. This number of countries is larger than that of most studies on distance within the IB field and covers more variation on the three dimensions of distance. It also better represents continents usually under-sampled in the literature, such as Africa and Asia.

4.2. Measures

The dependent variable is measured as the stock of OFDI from China and Spain to the 106 countries (see Table 1). The first-order constructs creating COD are measured by means of a number of indicators. First, economic (industrial development), educational (levels of education) and democratic (degree of democracy) distances are based on the scales developed in the seminal article by Dow and Karunaratna (2006) (see their "Appendix C. Formulae for psychic distance stimuli") and data available on the Internet (https://sites.google.com/site/ddowresearch/). The metric properties of the scales were tested for 14,042 country pairs and reduced to single factors using confirmatory factor analysis (CFA). Accordingly, we use the absolute value of the factor scores of differences in industrial development, levels of education and degree of democracy in our analyses (Dow and Karunaratna, 2006).

("Insert Table 1 about here")

[5] Chinese firms may consider Hong Kong as an alternative investment location in the same comparison set as autonomous regions in China (such as, for instance, Xinjiang, Inner Mongolia or Ningxia) and as other administrative divisions (e.g., the 22 provinces and 4 municipalities) with different degrees of autonomy.

Second, differences in languages and religions are based on Dow and Karunaratna's (2006) scales (see their "Appendix A. Coding", "Appendix B. Classification schemes" and "Appendix C. Formulae for psychic distance stimuli"), and factor scores are obtained by means of CFA. We add a third indicator to the measure of cultural and historical distance - historical linkages to reflect the existence of enduring past linkages between countries (i.e., the Chinese and Spanish empires). In the case of China, this indicator captures whether a country was a tributary state of the Qing Dynasty (1644 to 1912), while with respect to Spain, we measure whether Spain shares a colonial link with the respective countries. In both cases, the time period considered is from 1650 onwards (see Dow and Karunaratna, 2006). This indicator is particularly relevant in the case of the Spanish database due to the large number of countries with a Spanish colonial heritage.

Third, physical distance is measured in terms of kilometres as well as hours or time zone differences between countries' capitals. This recognises our definition of physical distance as reflecting not only how close or far countries are in terms of space but also in time, which is consistent with the definitions of distance as space between two objects and as time between two events.

Finally, we use market size as a control variable in both country contexts. Market size has been widely used as an explanatory or control variable in previous studies regarding the effect of distance on and determinants of FDI (e.g., Terpstra and Yu, 1998). We measure market size based on the gross domestic product (GDP) of the 106 countries included in our tests, and we derive the data from the World Bank's World Development Indicators (WDI) online database.

4.3. Data analysis technique

We estimate our model using a structural equations modelling technique - partial least squares (PLS) (Wold, 1982). PLS is a second-generation multivariate analysis technique and a powerful tool in the estimation of models with formative indicators (Hair et al., 2012), second and higher-order constructs (see Wetzels et al., 2009), and small sample sizes (Chin and Newsted, 1999;

Hair et al., 2012). Considering that COD is a higher-order construct, we used one of the PLS-based methods for estimating models with higher-order constructs and followed a procedure to replace lower-order constructs with latent variable scores (see Wetzels et al., 2009).

5. Findings

We test the metric properties of the indicators in the 106 countries and the two samples. First, we check item reliability by computing individual factor loadings of each indicator in its construct. We drop the indicator "historical ties" from the Chinese model because of its very low reliability. Table 2 shows that nearly all of the remaining indicators have loadings over the suggested 0.7 threshold (see column 2). However, there are two exceptions - distance in industrial development (0.64 for Spain) and distance in religions (0.64 for China). We kept them in the models as their construct reliability and average variance extracted (AVE) estimates are satisfactory and because the results with and without these indicators are similar.

("Insert Table 2 about here")

Second, construct reliability (see column 3), measured as composite reliability (Werts et al., 1974), is over the suggested threshold, ranging between 0.76 (cultural and historical distance for China) and 0.95 (physical distance for China). Third, AVE estimates (Fornell and Larcker, 1981) are above the minimum acceptance threshold of 0.5 (see column 4), implying that the variance shared between each construct and its set of indicators is larger than the variance due to the measurement error. Fourth, the comparison of the constructs' correlations with the square root of the AVE (Farrel, 2010; Fornell and Larcker, 1981) proves that the constructs are different from each other, i.e., they achieve discriminant validity (see Table 3). Thus, we conclude that the models are based on reliable and valid measures.

("Insert Table 3 about here")

To test our hypotheses, we assess the structural models using different statistics. First, based on bootstrap tests with 500 resamples (i.e., a nonparametric approach for estimating the precision of the PLS estimates), we find that the structural relationship between COD and OFDI is significant and in the expected direction in both the China and Spain models (see Figures 2 and 3). The path coefficient is larger in the case of China ($\beta = -0.55$, $p < 0.01$) than in the case of Spain ($\beta = -0.29$, $p < 0.001$). Second, COD explains 10.39% of the OFDI variance (R^2) in the model with Spanish data and 33.17% in the model with data from China. The control for market size (GDP) explains 21.48% of the variance (R^2) in the Spanish model and 9.91% in the Chinese model. Finally, both models have predictive relevance as the Stone-Geisser cross-validated redundancy (Q^2) statistic computed using a blindfolding technique (with the omission distance fixed at 10) is 0.16 using the Chinese dataset and 0.13 using the Spanish dataset. In summary, we conclude that our analyses support Hypothesis 1 - the larger the country distance between China (Spain) and a host country, the lower the investments from China (Spain) in that country.

("Insert Figure 2 about here")

("Insert Figure 3 about here")

With respect to the weights of the three dimensions of COD, the findings support hypothesis 2, while also providing interesting insights that will be discussed below. The model for Spain (see Figure 2) shows that cultural and historical distance, socio-economic development distance and physical distance significantly contribute to the COD measure and in this order. Specifically, the weight of cultural and historical distance (0.59, $p < 0.01$) is greater than that of socio-economic development distance (0.48, $p < 0.01$) and physical distance (0.43, $p < 0.01$). This means that while Spanish OFDI are driven by all distance dimensions, it is mainly driven by cultural and historical distance. In the Chinese model (see Figure 3), the significance of the COD dimensions differs as only cultural and historical distance has a significant weight (0.84, $p < 0.001$), while socio-economic development distance (-0.31) and physical distance (0.22) do not seem to

influence Chinese OFDI decisions. Indeed, socio-economic distance has a surprising negative sign implying a positive correlation between this dimension and OFDI.

6. Discussion and conclusion

We first discuss our findings concerning the relationship between country distance and OFDI for China and Spain and then discuss the importance of the dimensions of COD. Furthermore, consistent with the exploratory approach adopted for the study of the importance of the dimensions, we formalise the empirical findings by developing two propositions for future testing and empirical validation in other country contexts.

6.1. Country distance and OFDI

Our findings suggest that our multi-dimensional construct country distance (COD) can explain FDI in two very different country contexts and provide empirical support to the hypothesis that larger distance between the home and host countries implies lower levels of outward FDI to the host country, a finding that is consistent with most literature on the effects of distance (e.g., Berry et al., 2010; Brewer, 2007a; Dow and Karunaratna, 2006; Dow and Larimo, 2009; Håkanson and Ambos, 2010; Sousa and Lages, 2011). However, COD is a stronger and better predictor of Chinese than of Spanish OFDI. Although distance has not been considered in some recent studies on Chinese OFDI (e.g., Gao, Liu and Zou, 2013; Liu, Buck and Shu, 2005; Wang et al., 2012), our finding suggests that managers in firms from China, an emerging economy, are actually driven by distance more so than managers in firms from Spain. In contrast, managers from Chinese firms are not significantly driven by market size, while this is the most important factor explaining Spanish OFDI. Taken together, these results suggest a more market-seeking behaviour of Spanish firms, whereas Chinese firms appear more concerned with the differences and challenges that confront them in their target markets. This interestingly complements earlier findings by Buckley and colleagues (Buckley et al., 2007) that the key driver of Chinese outward FDI – between 1984 and 2001 – was market size. Their models did not include extensive measures of country distance, however, although they suggested that cultural

proximity (measured with the proxy "size of ethnic Chinese minorities in host countries") and close geographical distance to China increased the likelihood of Chinese investments in countries. Our results confirm recent work on Chinese OFDI, between 2003 and 2009, which finds a negative relation between psychic distance and Chinese investments abroad (Blomkvist and Drogendijk, 2012). We add to these findings by showing more clearly how country distance and different dimensions of distance explain Chinese OFDI and by offering a comparative perspective to investments made by firms from other markets, in this case Spain.

Because our construct offers the possibility of quantifying the multidimensional distance between countries, we also visualise the distance of host countries from the baseline countries. To allow an easier interpretation of the distances, we transformed the latent variable scores to a scale of 1 to 100 by applying the following formula (cf., Cavusgil et al., 2004):

$$X'_{ij} = [[(X_{ij} - min_i) / R_i] 99] + 1$$

where X'_{ij} is the transformed value of country j for the dimension i; X_{ij} is the latent variable score of country j on dimension i; min_i is the minimum value for dimension i, and R_i is the range of dimension i.

Table 4 and Appendices A and B provide the results of these transformed rankings per dimension of distance. Overall, at a smaller distance from Spain are Latin and European countries, while Asian and African countries are at a larger distance. Closer to China are countries in Asia and Oceania, while African and Latin American countries are at a larger distance.

("Insert Table 4 about here")

6.2. Importance of the country distance dimensions

As for the weights of the three dimensions composing COD, we find empirical support for our second hypothesis, that is, the relative importance of the different dimensions of distance

depends on the home country context. Cultural and historical distance is the factor making the most important contribution in both empirical settings although with different weights across the two countries, thus suggesting that this dimension is the main constituent of the relevant distance between countries considered by managers in the context of FDI. Indeed, cultural proximity has been discussed as a determinant of FDI location for Spanish MNEs in Europe (Jiménez, Durán and de la Fuente, 2011). Consistently, cultural and linguistic affinity has been identified as the most important driver of Spanish FDI in Latin America (Galan and Gonzalez-Benito, 2006), while location decisions of Spanish MNEs in this region are mainly determined by social and cultural factors (Galan, González-Benito and Zúñiga-Vicente, 2007). Similarly, cultural variables, cultural distance and language and religion distance have also previously been found to affect Chinese OFDI in the few studies that have investigated the effect of distance between countries on the phenomenon (Drogendijk and Blomkvist, 2012; Blomkvist and Drogendijk, 2012).

Some remarkable further observations can be made. As reflected in our findings, Spanish firms consider socio-economic development distance and physical distance as significant contributors to inter-country distance and as important FDI location explanations (Jiménez et al., 2011), while these are not found to be relevant in the case of FDI decisions by Chinese firms in our comparative study. That Spanish firms consider socio-economic development distance reinforces the premise previously posited that Spanish firms may behave more in agreement with a market-seeking strategy in their FDI decisions than do Chinese firms, a finding that could be motivated by a broad set of factors. It could also be connected with the search for strategic assets in developed countries by managers of Spanish MNEs (Galan et al, 2007).

In contrast, Chinese firms' investments can, for example, not be understood without reference to the influence of the Chinese government and its policies (Gugler and Fetscherin, 2010; Wang, Hong, Kafouros and Boateng, 2013). Indeed, Chinese firms enjoy a large set of home country measures supporting their internationalisation, and Chinese state-owned enterprises (SOEs) investing abroad receive important support (e.g., financial and fiscal incentives) (Sauvant, 2013). Although Spanish firms investing abroad also receive support from

public policy decision makers, the government is much more active in inward FDI policy and in ensuring that Spain is an easy and attractive place for investment (Clifton, Díaz-Fuentes and Ruiz, 2011). Further, an important motivation for Chinese investments mentioned in the literature is resource and asset seeking, both in terms of natural resources, thus explaining Chinese investments in resource-rich countries (Morck et al., 2008), and in advanced (technological) knowledge (Rui and Yip, 2008), thus explaining investments in developed economies. Although outsourcing and other collaborative agreements may constitute an alternative route to advanced knowledge, this may explain why socio-economic development distance has a negative contribution to COD in our analyses of Chinese OFDI. Countries at a large socio-economic development distance from China include developed and resource- and asset-rich countries such as the USA, Canada and Australia (see column 2 in Appendix B). This implies that the challenges related to country distance seem to be rationalised in certain contexts, here in the context of emerging market firms seeking to catch-up in the global economy.

6.3. Formalising the importance of key country distance dimensions and context

According to the exploratory character of our paper concerning the contribution of the dimensions and the lack of robust theoretical guidance regarding how context affects the dimensions of distance, we formulate two propositions for future empirical testing using new baseline countries. We build on the emerging market and internationalisation literatures.

First, we have determined that socio-economic distance significantly contributes to the COD measure in the context of Spain while it is not a significant contributor and driver of OFDI from China. This may be seen as supplementing examples on the role of this distance in the expansions of Western firms into countries with different levels of economic development or different political systems. Firms investing in Central and Eastern Europe in the early 1990s experienced how the lack of developed financial and legal institutions to support effective markets slowed their internationalisation (see, for example, Peng and Heath, 1996). There is also evidence showing that it is difficult for firms to obtain the financial means for investing in

underdeveloped capital markets of African countries (Okeahalam and Wood, 2009). Further, firms have been reported to reconsider and adapt their international strategies when confronted with complex and unstable political systems (Henisz, 2000a), such as in the early years of transition in Central and Eastern Europe in the 1990s, in many African countries today (cf. Meredith, 2005), or when the state plays a dominant role in the economy (Luo, 2001). All of this suggests, consistent with our findings, that socio-economic distance is a relevant dimension of country distance seriously affecting international decisions and activities of firms from developed economies. In addition, the literature on the internationalisation of emerging market firms indicates that it may be easier for firms from these markets to do business in countries that are at a lower level of economic development (Cuervo-Cazurra and Genc, 2008). Thus, we formulate the following proposition:

> Proposition 1: Socio-economic development distance between the home and host country better explains the level of outward FDI to host countries for firms from developed than for firms from emerging countries.

Second, our findings indicate that cultural and historical distance is important for both Spain and China but that it is particularly relevant in the context of China as a determinant of OFDI. The literature on internationalisation recognises that this dimension affects internationalisation decisions because of its influence on information flows and difficulties in communication (Brewer, 2007a; Johanson and Wiedersheim-Paul, 1975), obstacles to international activities, and uncertainty and risk perceived by managers (Johanson and Vahlne, 1977). The literature also argues that the accumulation of market knowledge influences decisions regarding the level of commitment (Johanson and Vahlne, 1977; 1990; Papadopoulos and Martín Martín, 2010) with respect to, for example, FDI. Emerging market firms have arrived later to the international arena and are expected to possess less market experience and knowledge (including experience and knowledge about cultural differences) than firms from developed markets. Therefore, we offer the following proposition:

Proposition 2: Cultural and historical distance between the home and host countries better explains the level of outward FDI to host countries for firms from emerging than for firms from developed countries.

Finally, we conclude that this study contributes to the IB literature and the conceptualisation, operationalization and discussion of distance by exploring the multidimensionality of distance between countries in two empirical settings – OFDI from China and Spain – and formalising the difference in importance of its dimensions in these settings.

7. Implications, limitations and future research

7.1. Implications for researchers and practitioners

This study has important implications for researchers, managers and public policy makers. First, researchers can infer from our study that country distance can be reliably and validly measured as a higher-order multidimensional construct rather than as a set of separate dimensions. This positively contrasts with the approach generally followed in the literature whereby the different dimensions are not combined into a single measure of country distance and, therefore, scores of country distance are not an outcome (compare Berry et al., 2010; Dow and Karunaratna, 2006; and Ghemawat, 2001). Our approach offers scores and rankings of both the higher-order and multidimensional construct of distance and each dimension composing it. These scores also allow managers to visualise how far and how close countries are when more than one dimension of distance is considered.

Second, researchers must be aware that the importance of the dimensions varies across countries. Although the relevance of contextual factors in assessing international opportunities has been emphasised (Douglas and Craig, 2011), much research is formulated in general terms without considering the context of the international decision under analysis. IB scholars must pay attention to the empirical context in which their hypotheses are tested and add nuances to

their formulations so they reflect the specificities of the context. This is in no way in conflict with the aim for validity and generalizability of findings across studies.

Third, our study shows that managers in different countries are giving different importance to distance factors when making FDI decisions. In particular, our country distance analysis suggests that managers in China are mainly guided by cultural and historical aspects when selecting host markets for investments, while managers in Spain also react to socio-economic and physical distances when making their investment decisions. To seize opportunities in foreign markets, managers must consider not only the situations of their firms and the relative importance of the distance dimensions but also the implications of potential asymmetries in the socio-economic development distance depending on their country of origin. The literature on internationalisation of emerging market firms suggests that it may be easier for Chinese firms, in comparison to firms from developed Western markets, to conduct business in countries that are, similar to China, at a lower level of economic development (Cuervo-Cazurra and Genc, 2008).

Fourth, as OFDI plays a crucial role in establishing businesses, creating jobs at home and abroad, setting up global supply chains, acquiring and accessing resources, assets and knowledge, and fostering exports (Alguacil and Orts, 2002), there is rationale for policies aimed at overcoming distance affecting this decision. Public policy programs addressed to stimulate internationalisation and overcome the difficulties that firms experience in foreign markets should consider the main dimensions creating distance to their country when designing what support to offer investing companies.

7.2. Limitations and future research

There are limitations to our study, which thereby offer research opportunities for future studies. First, although the stocks of OFDI faithfully reflect the amount of investments carried out by China and Spain in foreign markets and the dimensions creating COD can be assumed to be relatively stable, our data are cross-sectional. This precludes us from making causal statements about the relationship between COD and OFDI. Future research should study COD and OFDI in

different moments of time and focus not only on whether the empirical context of the study is relevant but also on the temporal changes in the relationship and the factors potentially explaining these changes. Second, as our study was exploratory and not aimed at explaining FDI but rather at validating an original construct and comparing the importance of its dimensions in two country contexts, we did not obtain data dealing with all potential determinants of FDI or data disaggregated per industry. Future studies can integrate other drivers and motivations of outward FDI not considered in our study.

Furthermore, in our study, we have calculated the absolute distances in the respective dimensions. This means that we have not taken into account what it means that countries score higher or lower on certain dimensions of the baseline country. For example, countries at the same socio-economic distance could have a lower or higher level of economic development than our base countries, Spain and China. Future studies could investigate this asymmetry and the influence of positive or negative values for some measures and dimensions of distance and study whether this property is related to the different challenges that firms experience when investing in countries at, respectively, smaller and larger positive and negative socio-economic development distances. In addition, we have developed an objective measure of distance, and more research is needed on the relationships between objective measures and subjective perceptions of distance (such as psychic distance) and the implications and determinants of this distance gap as the development of COD scores for a large number of baseline countries and international decisions would assist practitioners when facing such decisions. Finally, future studies could compare the explanatory power of COD and other multidimensional measures of distance in different empirical contexts. Multidimensional conceptualisations and measures of country distance are the future standard for IB studies, and much can be done to drive their development forward.

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Table 1

Constructs, Indicators and Data Sources

Construct/ Indicator	Source
Outward foreign direct investment (stocks, EUR millions, 2009)	Statistical Bulletin of China's OFDI, and "DataInvex" (Spain)
Socio-economic development distance	
Distance in levels of education factor (absolute value)	https://sites.google.com/site/ddowresearch/
Distance in degree of democracy factor (absolute value)	https://sites.google.com/site/ddowresearch/
Distance in industrial development factor (absolute value)	https://sites.google.com/site/ddowresearch/
Cultural and historical distance	
Distance in languages factor	https://sites.google.com/site/ddowresearch/
Distance in religions factor	https://sites.google.com/site/ddowresearch/
Historical ties (post-1650 historical link between countries)	Barraclough, G. (1988)
Physical distance	
Time zone differential between countries (hours)	www.timeanddate.com
Geographical distance between countries (Km from capitals)	www.chemical-ecology.net
Gross domestic product (in millions of current USD, 2009)	The World Bank (WDI)

Table 2

Reliability and Average Variance Extracted for the Reflective Constructs

Construct/ Indicator	Item reliability Loading	Construct reliability Composite reliability	Convergent validity *AVE*
Spain			
Socio-economic development distance		0.85	0.67
Distance in levels of education factor	0.90		
Distance in degree of democracy factor	0.89		
Distance in industrial development factor	0.64		
Cultural and historical distance		0.86	0.67
Distance in languages factor	0.84		
Distance in religions factor	0.84		
Historical ties	0.78		
Physical distance		0.94	0.88
Time zone differential between countries	0.88		
Geographical distance between countries	0.99		
China			
Socio-economic development distance		0.87	0.69
Distance in levels of education factor	0.82		
Distance in degree of democracy factor	0.73		
Distance in industrial development factor	0.94		
Cultural and historical distance		0.76	0.62
Distance in languages factor	0.91		
Distance in religions factor	0.64		
Physical distance		0.95	0.91
Time zone differential between countries	0.99		
Geographical distance between countries	0.92		

Table 3

Discriminant Validity: First Order Latent Variable Correlations and Square Root of the Average Variances Extracted[a]

Spain	Construct	1	2	3	4	5
	1. Socio-economic development distance	**0.82**				
	2. Cultural and historical distance	0.44	**0.82**			
	3. Physical distance	0.09	-0.11	**0.94**		
	4. OFDI	-0.28	-0.15	-0.27	**1**	
	5. GDP	-0.25	0.00	-0.05	0.49	**1**
China	**Construct**	**1**	**2**	**3**	**4**	**5**
	1. Socio-economic development distance	**0.83**				
	2. Cultural and historical distance	-0.14	**0.78**			
	3. Physical distance	0.10	0.24	**0.95**		
	4. OFDI	0.25	-0.24	-0.56	**1**	
	5. GDP	0.42	0.04	-0.08	0.37	**1**

[a] Diagonal values in bold are the square root of the variance shared between the reflective constructs and their measures. To achieve discriminant validity, diagonal elements must be larger than off-diagonal elements.

Table 4

Top and bottom ranked countries for country distance and its dimensions: Spain and China

	COD	*SED*	*CHD*	*PHD*
Spain	*Mostly European and Latin American countries in top ten; Asian countries in bottom ten*	*European countries, plus Canada, South Korea and New Zealand in top ten; Least developed economies in Africa and Asia in bottom ten*	*Latin American (Spanish speaking) countries in top ten; Mostly Middle Eastern and Asian countries in bottom ten*	*Top ten: Surrounding countries in Europe and Northern Africa; Bottom ten: Countries in Oceania and South East Asia*
China	*Mainly Asian countries, plus larger markets in Oceania in top ten; Mainly African countries in bottom ten*	*Top ten: Countries in Asia and Africa; Bottom ten: Western countries in North America and Europe, plus Japan, Australia and New Zealand*	*A mix of countries, including several Asian countries in top ten; Also mixed, but mainly African countries in bottom ten*	*Top ten: Nearby Asian countries; Bottom ten: South American countries*

Figure 1

Country Distance (COD): Conceptualisation and Outcomes

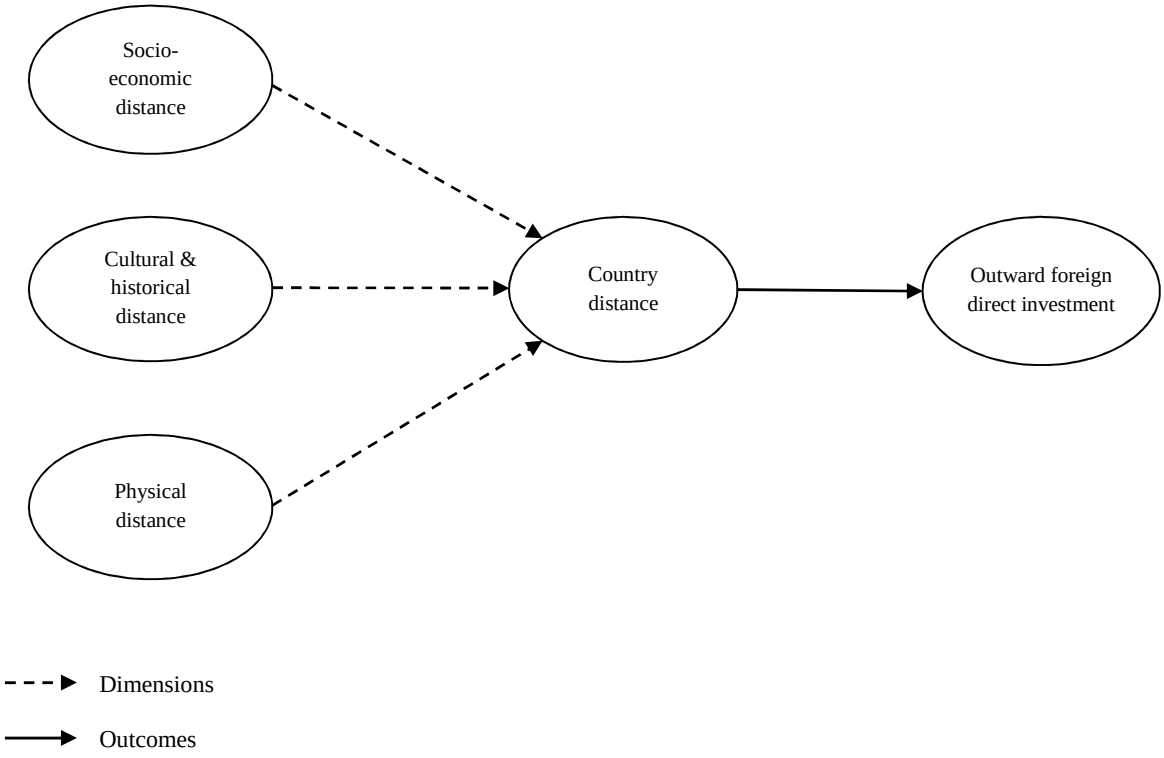
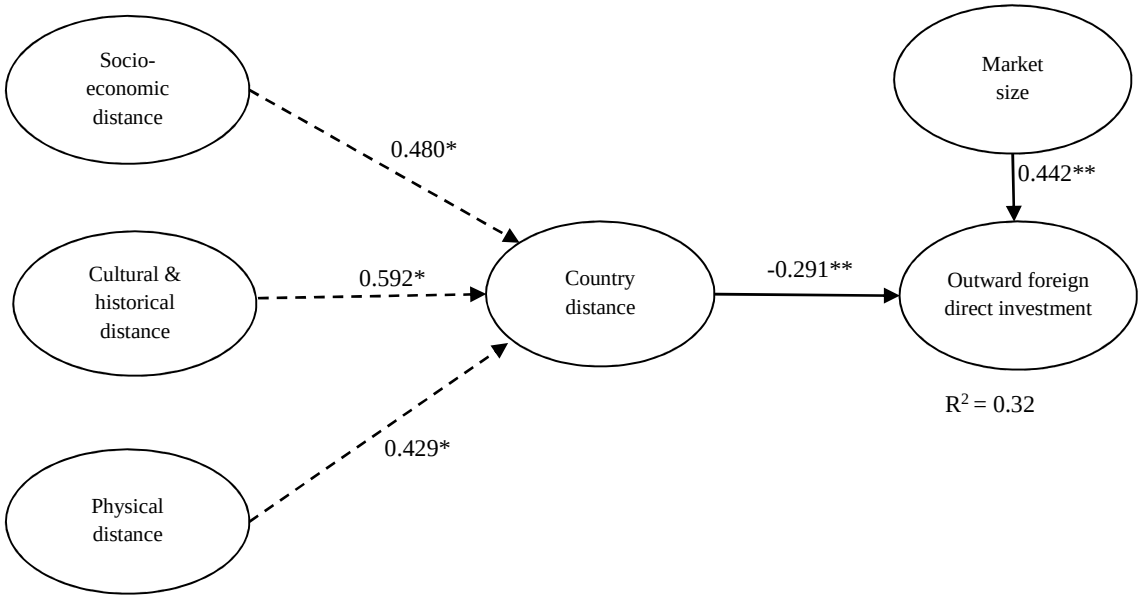


Figure 2

Outward Foreign Direct Investment (Spain): Contributions, Structural Paths, and Explained Variances



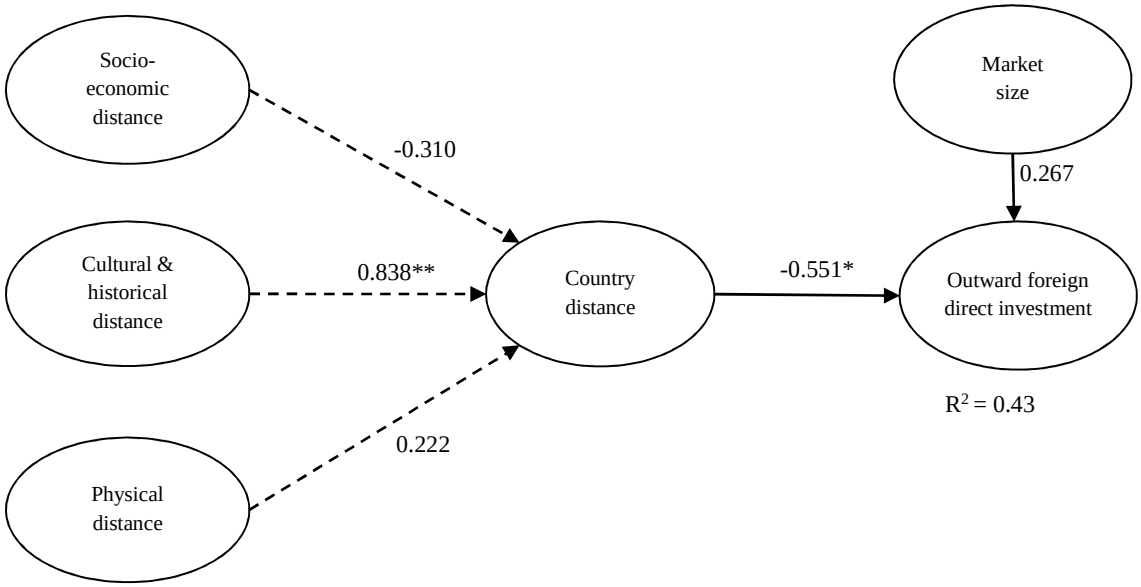
** $p < 0.001$; * $p < 0.01$ (based on a Student $t_{(499)}$ distribution with one tail).

Measurement model

Structural model

Figure 3

Outward Foreign Direct Investment (China): Contributions, Structural Paths, and Explained Variances



** $p < 0.001$; * $p < 0.01$ (based on a Student $t_{(499)}$ distribution with one tail).

Measurement model

Structural model

Appendix A

Spain: Country Scores on the Country Distance Index and its Dimensions

Country Distance		Socio-economic development distance		Cultural and historical distance		Physical distance	
Italy	1,00	Italy	1,00	Argentina	1,00	Portugal	1,00
Venezuela	11,16	Czech Republic	2,26	Chile	1,00	Algeria	1,88
Uruguay	11,99	Korea, R.	3,72	Colombia	1,00	France	2,02
Argentina	12,43	Greece	4,30	Costa Rica	1,00	Switzerland	2,43
France	12,63	Canada	4,67	Mexico	1,00	Luxembourg	3,01
Costa Rica	12,81	Ireland	5,18	Venezuela	1,00	Belgium	3,16
Portugal	13,56	France	6,56	Uruguay	4,75	Italy	3,43
Ireland	14,29	Germany	7,48	Peru	5,34	Morocco	3,58
Switzerland	15,60	New Zealand	7,56	Ecuador	5,34	Netherlands	3,91
Austria	15,89	Austria	8,82	Panama	9,09	United Kingdom	4,38
Chile	16,38	Finland	9,80	Italy	37,30	Malta	4,73
Belgium	16,77	Portugal	9,88	Philippines	38,33	Croatia	4,88
Czech Republic	17,31	Netherlands	10,46	USA	50,59	Libyan Arab J.	4,95
Germany	17,62	Norway	11,89	Brazil	50,70	Czech Republic	5,21
Colombia	17,75	Denmark	11,95	Congo, D. R.	50,70	Ireland	5,21
Netherlands	18,11	Estonia	12,75	Luxembourg	50,70	Austria	5,37
Ecuador	19,38	Australia	12,83	Switzerland	51,15	Slovakia	5,59
Panama	19,97	United Kingdom	12,89	Canada	54,45	Germany	5,63
Greece	20,03	Japan	13,21	Belgium	54,45	Hungary	6,12
Slovakia	20,36	Slovakia	14,07	France	54,45	Serbia	6,38
Malta	20,90	Hungary	14,64	Portugal	54,45	Denmark	6,54
Mexico	21,55	Belgium	14,70	Austria	55,48	Poland	7,51
Denmark	22,04	Lithuania	14,96	Croatia	55,48	Norway	7,95
Hungary	22,33	Latvia	15,36	Ireland	55,48	Bulgaria	8,77
Norway	22,71	Bulgaria	16,85	Papua New Guinea	55,48	Sweden	8,86
Poland	23,23	Uruguay	17,02	Malta	57,81	Greece	9,30
Lithuania	23,28	Switzerland	17,05	Vanuatu	57,94	Romania	9,76
Peru	23,39	Malta	18,14	Cameroon	58,23	Lithuania	10,60
Luxembourg	23,44	Poland	18,36	Lebanon	58,23	Ukraine	11,55
United Kingdom	23,59	Iceland	18,36	Madagascar	58,23	Estonia	11,64
Finland	25,09	Sweden	18,94	Mozambique	58,23	Finland	11,88
Canada	26,49	USA	19,08	Australia	59,24	Turkey	12,47
Bulgaria	27,55	Israel	20,23	Germany	59,24	Iceland	13,05
Romania	27,86	Trinidad & Tobago	21,49	Ghana	59,24	Egypt	13,67
Iceland	27,99	Russian Federation	21,80	Kenya	59,24	Lebanon	14,42
Sweden	28,43	Argentina	22,69	Lithuania	59,24	Israel	14,75
Croatia	28,94	Romania	22,98	Netherlands	59,24	Syrian Arab R.	14,79
Estonia	29,41	Costa Rica	26,50	Poland	59,24	Jordan	14,81
USA	31,58	Chile	26,67	Slovakia	59,24	Nigeria	14,90
Russian Federation	33,00	Samoa	26,85	Suriname	59,24	Russian Federation	15,52
Ukraine	33,60	Ukraine	27,85	Trinidad & Tobago	59,24	Sierra Leone	16,53
Lebanon	35,90	Venezuela	33,69	Uganda	59,24	Cameroon	16,67
Latvia	36,21	South Africa	33,98	Zambia	59,24	Ghana	17,53
Trinidad & Tobago	38,46	Luxembourg	35,07	Hungary	61,59	Cote d'Ivoire	17,55
Brazil	44,37	Panama	35,56	Romania	61,70	Sudan	18,54
Israel	44,58	Ecuador	36,22	Cote d'Ivoire	61,99	Iraq	19,31
Philippines	45,23	Thailand	38,14	Denmark	62,70	Kuwait	20,11
Serbia	45,82	Philippines	38,74	Greece	62,70	Iran	20,73
South Africa	47,19	Fiji	39,45	Iceland	62,70	Saudi Arabia	20,86
Suriname	47,53	Croatia	39,51	Norway	62,70	Congo, D. R.	22,49
Korea, R.	49,13	Jamaica	39,83	Samoa	62,70	Yemen	22,69
Ghana	50,29	Lebanon	40,72	Czech Republic	62,99	Ethiopia	22,95
Jamaica	53,11	Brazil	42,12	Latvia	62,99	Bahrain	23,17
Zambia	53,60	Colombia	42,15	Tanzania, United R.	62,99	Qatar	23,79
Madagascar	53,73	Turkey	43,21	Zimbabwe	62,99	Uganda	24,37
Cameroon	55,72	Suriname	44,96	Finland	65,05	United A. Emirates	25,20
Congo, D. R.	55,90	Singapore	45,19	Bulgaria	66,45	Kenya	26,29
Kenya	57,58	Mexico	45,59	Jamaica	66,45	Uzbekistan	28,05
Kazakhstan	58,28	Sri Lanka	46,25	New Zealand	66,45	Oman	28,36
Uganda	58,46	Vanuatu	47,05	Russian Federation	66,45	Zambia	28,60
Zimbabwe	59,03	Malaysia	47,10	Serbia	66,45	Tanzania, United R.	29,20
Turkey	59,50	Peru	48,60	South Africa	66,45	Kazakhstan	29,75
Cote d'Ivoire	60,66	Kazakhstan	48,74	Sweden	66,45	Afghanistan	30,26
Australia	60,79	Madagascar	54,93	Ukraine	66,45	Pakistan	31,18
Mozambique	61,87	India	55,96	United Kingdom	66,45	Canada	31,25

Appendix A (continuation)

Spain: Country Scores on the Country Distance Index and its Dimensions

Country Distance		Socio-economic development distance		Cultural and historical distance		Physical distance	
Tanzania, United R.	62,78	Papua New Guinea	56,79	Estonia	70,23	Zimbabwe	31,45
Nigeria	63,45	Kuwait	61,03	Ethiopia	70,23	Latvia	31,62
Algeria	65,96	Serbia	61,83	Nigeria	70,23	Suriname	32,93
Jordan	67,04	Jordan	63,01	Fiji	73,99	USA	33,04
Ethiopia	67,30	Zambia	63,87	Korea, R.	76,34	South Africa	33,17
Morocco	67,61	United A. Emirates	63,98	Kazakhstan	77,74	Mozambique	34,14
Japan	67,84	Bahrain	64,73	Israel	88,32	India	34,69
Libyan Arab J.	68,49	Uzbekistan	66,07	Qatar	88,87	Trinidad & Tobago	35,02
Kuwait	68,83	Zimbabwe	67,99	Sierra Leone	88,87	Venezuela	37,07
New Zealand	69,37	Bangladesh	68,74	Egypt	91,22	Madagascar	37,52
Samoa	69,40	Ghana	69,17	Indonesia	91,22	Nepal	38,20
Egypt	70,38	Qatar	69,20	Malaysia	91,22	Brazil	38,93
Qatar	70,64	Pakistan	70,03	Sudan	91,22	Jamaica	39,90
Bahrain	71,98	Iran	72,12	Syrian Arab R.	91,22	Bangladesh	41,55
Sri Lanka	72,06	Morocco	72,55	Uzbekistan	91,22	Sri Lanka	42,24
United A. Emirates	72,63	Vietnam	72,92	Singapore	92,49	Colombia	43,05
Uzbekistan	72,76	Nepal	74,87	Sri Lanka	92,49	Panama	43,72
Syrian Arab R.	73,66	Algeria	75,47	Pakistan	92,63	Peru	43,72
Papua New Guinea	73,74	Oman	75,53	Myanmar	94,85	Ecuador	46,30
India	74,64	Kenya	75,96	Vietnam	94,85	Costa Rica	46,56
Iran	74,77	Korea, D. P. R.	76,13	Algeria	94,98	Mexico	47,71
Vanuatu	75,78	Indonesia	76,68	Bahrain	94,98	Uruguay	48,75
Thailand	75,86	Egypt	77,22	Iraq	94,98	Vietnam	49,17
Saudi Arabia	76,84	Mozambique	77,56	Jordan	94,98	Argentina	49,21
Pakistan	76,97	Libyan Arab J.	77,76	Kuwait	94,98	Thailand	49,81
Sierra Leone	77,51	Saudi Arabia	78,48	Libyan Arab J.	94,98	Lao P. D. R.	50,47
Malaysia	78,21	Tanzania, United R.	79,51	Saudi Arabia	94,98	Korea, D. P. R.	50,95
Iraq	78,68	Uganda	80,14	United A. Emirates	94,98	Korea, R.	51,88
Singapore	78,75	Syrian Arab R.	83,47	India	96,25	Chile	53,56
Fiji	79,32	Cameroon	83,81	Afghanistan	96,41	Malaysia	55,19
Sudan	80,90	Iraq	84,79	Bangladesh	96,41	Japan	55,28
Oman	81,49	Yemen	84,99	Iran	96,41	Singapore	56,58
Yemen	82,71	Myanmar	86,85	Japan	98,60	Myanmar	56,60
Bangladesh	83,69	Ethiopia	87,39	Korea, D. P. R.	98,60	Philippines	57,79
Nepal	86,61	Congo, D. R.	87,51	Lao P. D. R.	98,60	Indonesia	58,65
Vietnam	88,52	Nigeria	87,68	Thailand	98,60	Papua New Guinea	79,28
Afghanistan	91,55	Cote d'Ivoire	89,40	Morocco	98,73	Fiji	83,94
Indonesia	92,76	Lao P. D. R.	93,15	Oman	98,73	Australia	86,98
Korea, D. P. R.	92,92	Sierra Leone	93,55	Turkey	98,73	Samoa	87,98
Myanmar	98,24	Sudan	95,87	Yemen	98,73	Vanuatu	88,92
Lao P. D. R.	100,00	Afghanistan	100,00	Nepal	100,00	New Zealand	100,00

Appendix B

China: Country Scores on the Country Distance Index and its Dimensions

Country Distance		Socio-economic development distance		Cultural and historical distance		Physical distance	
Singapore	1,00	Indonesia	1,00	Singapore	1,00	Philippines	1,00
Australia	59,10	Myanmar	4,37	Myanmar	65,13	Korea, D. P. R.	3,43
Myanmar	64,76	Zimbabwe	5,93	Korea, D. P. R.	70,51	Malaysia	3,57
Malaysia	66,36	Syrian Arab R.	6,74	Australia	70,74	Korea, R.	3,66
Korea, D. P. R.	67,72	Congo, D. R.	7,46	Malaysia	70,74	Singapore	3,78
Japan	70,44	Iran	7,67	Jamaica	75,65	Indonesia	5,03
Czech Republic	78,54	Egypt	9,05	Venezuela	75,65	Japan	5,64
New Zealand	78,89	Nigeria	9,33	Czech Republic	85,26	Vietnam	6,00
Venezuela	78,91	Cameroon	9,57	Japan	85,26	Lao P. D. R.	6,75
Finland	79,03	Ghana	9,75	Latvia	85,26	Thailand	7,69
Latvia	79,24	Algeria	10,01	Vietnam	85,26	Russian Federation	9,13
Jamaica	79,43	Korea, D. P. R.	11,41	Indonesia	90,17	Myanmar	10,07
Russian Federation	79,54	Sudan	12,71	Lao P. D. R.	90,17	Bangladesh	13,16
USA	79,84	Kenya	12,78	Russian Federation	90,17	Nepal	14,85
Netherlands	80,17	Jordan	13,28	Sri Lanka	90,17	Kazakhstan	17,23
Sweden	80,30	Zambia	13,64	United A. Emirates	90,17	India	17,42
Germany	80,35	Libyan Arab J.	14,11	New Zealand	90,17	Australia	17,49
France	80,42	Lao P. D. R.	14,39	Sudan	90,17	Papua New Guinea	18,79
Vietnam	80,48	Yemen	14,99	Finland	90,17	Sri Lanka	19,83
Canada	80,76	Vietnam	15,12	Estonia	90,17	Pakistan	20,53
Korea, R.	80,83	Madagascar	15,90	Syrian Arab R.	90,17	Uzbekistan	20,65
Belgium	80,84	Cote d'Ivoire	16,06	Romania	90,17	Afghanistan	24,02
Italy	81,19	Iraq	16,68	Jordan	90,17	Vanuatu	28,19
United Kingdom	81,55	Afghanistan	16,81	Bulgaria	90,17	Oman	29,56
Luxembourg	82,32	Morocco	17,35	Egypt	90,17	United A. Emirates	30,07
Estonia	83,29	Sri Lanka	17,85	Sweden	90,17	Iran	32,41
Norway	83,87	India	18,24	Poland	90,17	Fiji	35,40
Denmark	84,12	Tanzania, United R.	18,34	Hungary	90,17	Qatar	36,32
Bulgaria	84,22	Thailand	18,73	Germany	90,17	Bahrain	36,36
United A. Emirates	84,85	Uzbekistan	19,12	Netherlands	90,17	Kuwait	36,41
Hungary	84,87	Philippines	19,38	Luxembourg	90,17	Iraq	36,58
Austria	84,97	Uganda	19,98	Belgium	90,17	Saudi Arabia	37,12
Lao P. D. R.	84,97	Sierra Leone	19,98	Italy	90,17	New Zealand	38,27
Switzerland	85,09	Vanuatu	20,16	France	90,17	Yemen	38,46
Portugal	85,16	Papua New Guinea	21,51	United Kingdom	90,17	Ethiopia	40,04
Romania	85,26	Peru	21,97	Portugal	90,17	Sudan	40,18
Poland	85,63	Serbia	22,08	USA	90,17	Kenya	41,57
Sri Lanka	85,91	Brazil	22,10	Canada	90,17	Uganda	42,00
Iceland	86,05	Turkey	22,23	Uruguay	90,17	Madagascar	42,28
Indonesia	86,62	Pakistan	22,26	Chile	90,17	Tanzania, United R.	42,33
Greece	86,98	Ecuador	22,70	Korea, R.	95,09	Finland	42,58
Malta	87,42	Malaysia	22,80	Thailand	95,09	Estonia	42,65
Kazakhstan	87,60	Colombia	23,40	Bangladesh	95,09	Ukraine	42,77
Kuwait	88,01	Suriname	23,69	Kazakhstan	95,09	Latvia	42,91
Bangladesh	88,25	Oman	23,92	India	95,09	Lithuania	42,98
Bahrain	88,33	Jamaica	24,05	Pakistan	95,09	Turkey	43,41
Israel	88,34	Mexico	24,31	Uzbekistan	95,09	Syrian Arab R.	43,57
Thailand	88,75	Fiji	24,34	Afghanistan	95,09	Lebanon	43,69
Qatar	88,76	South Africa	24,70	Oman	95,09	Romania	43,81
Sudan	88,86	Saudi Arabia	25,53	Iran	95,09	Jordan	43,86
Jordan	89,19	Ethiopia	25,79	Fiji	95,09	Bulgaria	44,33
Lebanon	89,45	Mozambique	26,41	Qatar	95,09	Israel	44,42
Pakistan	89,66	Bangladesh	26,83	Bahrain	95,09	Egypt	44,61
Egypt	89,85	Panama	27,45	Kuwait	95,09	Greece	44,78
India	89,90	Costa Rica	29,97	Iraq	95,09	Libyan Arab J.	46,68
Uruguay	89,90	Samoa	30,36	Saudi Arabia	95,09	Samoa	47,98
Syrian Arab R.	90,07	Nepal	31,63	Yemen	95,09	Sweden	49,13
Uzbekistan	90,12	Venezuela	31,79	Turkey	95,09	Poland	49,51
Oman	90,43	United A. Emirates	33,60	Lebanon	95,09	Norway	49,72
Afghanistan	90,81	Chile	34,49	Israel	95,09	Denmark	50,01
Fiji	91,01	Kazakhstan	34,59	Greece	95,09	Hungary	50,19
Saudi Arabia	91,04	Croatia	38,46	Libyan Arab J.	95,09	Germany	50,26
Nepal	92,03	Qatar	41,21	Norway	95,09	Zimbabwe	50,29
Turkey	92,17	Romania	41,49	Denmark	95,09	Slovakia	50,34

Appendix B (Continuation)

China: Country Scores on the Country Distance Index and its Dimensions

Country Distance		Socio-economic development distance		Cultural and historical distance		Physical distance	
Philippines	92,21	Lebanon	42,09	Austria	95,09	Serbia	50,36
Iraq	92,22	Trinidad & Tobago	42,66	Switzerland	95,09	Zambia	50,41
Chile	92,38	Poland	43,44	Malta	95,09	Czech Republic	50,41
Ireland	92,41	Argentina	44,04	Algeria	95,09	Austria	50,43
Lithuania	92,48	Bahrain	44,24	Iceland	95,09	Croatia	50,78
Slovakia	92,62	Ukraine	46,17	South Africa	95,09	Mozambique	51,07
Yemen	92,64	Kuwait	46,76	Morocco	95,09	Netherlands	51,09
Iran	92,98	Uruguay	47,80	Ghana	95,09	Luxembourg	51,30
Ukraine	93,07	Hungary	49,20	Mexico	95,09	Belgium	51,33
South Africa	93,40	Bulgaria	49,31	Costa Rica	95,09	Switzerland	51,54
Libyan Arab J.	93,69	Lithuania	50,50	Panama	95,09	Italy	51,61
Papua New Guinea	93,89	Israel	50,55	Suriname	95,09	France	51,77
Argentina	94,73	Latvia	53,17	Colombia	95,09	Malta	52,10
Morocco	94,75	Singapore	54,13	Ecuador	95,09	Algeria	53,28
Mexico	94,91	Estonia	54,71	Peru	95,09	Nigeria	56,39
Algeria	94,96	Portugal	55,02	Brazil	95,09	Cameroon	56,51
Croatia	95,03	Russian Federation	55,28	Argentina	95,09	Congo, D. R.	56,91
Vanuatu	95,10	Slovakia	55,67	Philippines	100,00	Iceland	57,07
Costa Rica	95,11	Greece	60,65	Nepal	100,00	United Kingdom	57,52
Ethiopia	95,63	Ireland	62,70	Papua New Guinea	100,00	South Africa	57,55
Samoa	95,87	Malta	63,35	Vanuatu	100,00	Ireland	57,76
Panama	96,13	Czech Republic	64,02	Ethiopia	100,00	Portugal	60,16
Ghana	96,16	Luxembourg	68,44	Kenya	100,00	Morocco	60,56
Uganda	96,63	Korea, R.	72,30	Uganda	100,00	Ghana	63,81
Mozambique	96,74	Italy	76,72	Madagascar	100,00	Cote d'Ivoire	64,33
Suriname	96,77	Iceland	77,03	Tanzania, U. R.	100,00	Sierra Leone	65,11
Colombia	96,81	United Kingdom	78,90	Ukraine	100,00	USA	68,69
Tanzania, U. R.	96,88	Belgium	79,21	Lithuania	100,00	Mexico	70,90
Ecuador	96,96	Austria	79,68	Samoa	100,00	Canada	73,38
Madagascar	97,24	Switzerland	79,68	Zimbabwe	100,00	Costa Rica	79,67
Serbia	97,28	Sweden	81,26	Slovakia	100,00	Jamaica	84,47
Peru	97,33	Germany	81,86	Serbia	100,00	Panama	86,05
Brazil	97,36	France	82,43	Zambia	100,00	Suriname	86,90
Kenya	97,60	New Zealand	82,87	Croatia	100,00	Colombia	87,07
Zambia	98,44	Netherlands	83,91	Mozambique	100,00	Ecuador	87,70
Trinidad & Tobago	98,98	Denmark	85,44	Nigeria	100,00	Venezuela	89,07
Sierra Leone	99,17	Finland	85,49	Cameroon	100,00	Peru	89,96
Zimbabwe	99,50	Australia	85,93	Congo, D. R.	100,00	Brazil	90,32
Cote d'Ivoire	99,64	Japan	86,84	Ireland	100,00	Trinidad & Tobago	92,01
Cameroon	99,69	Norway	86,97	Cote d'Ivoire	100,00	Uruguay	94,16
Nigeria	99,70	Canada	96,99	Sierra Leone	100,00	Argentina	94,35
Congo, D. R.	100,00	USA	100,00	Trinidad & Tobago	100,00	Chile	100,00